

Committee of the Whole Briefing

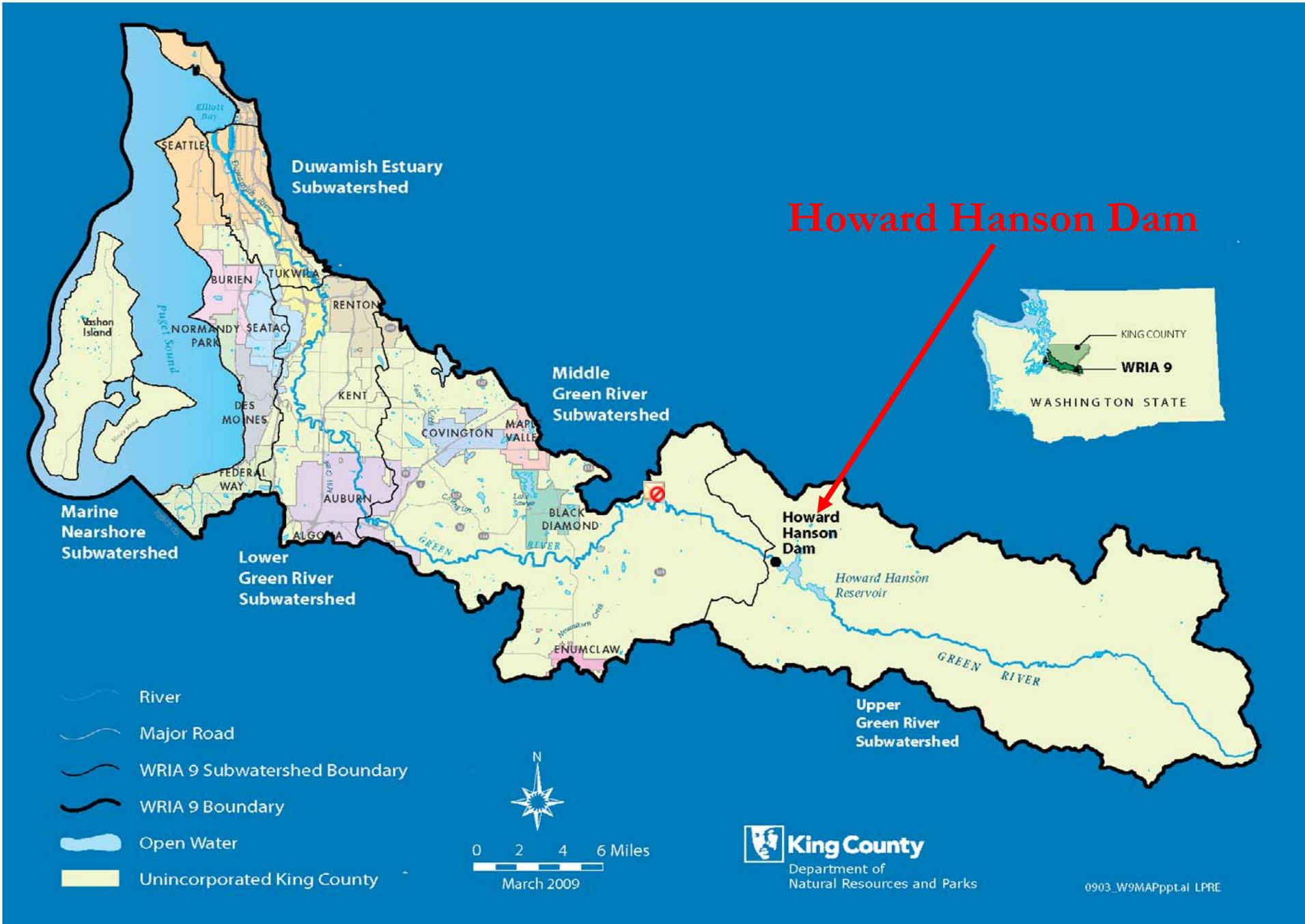
August 26, 2009

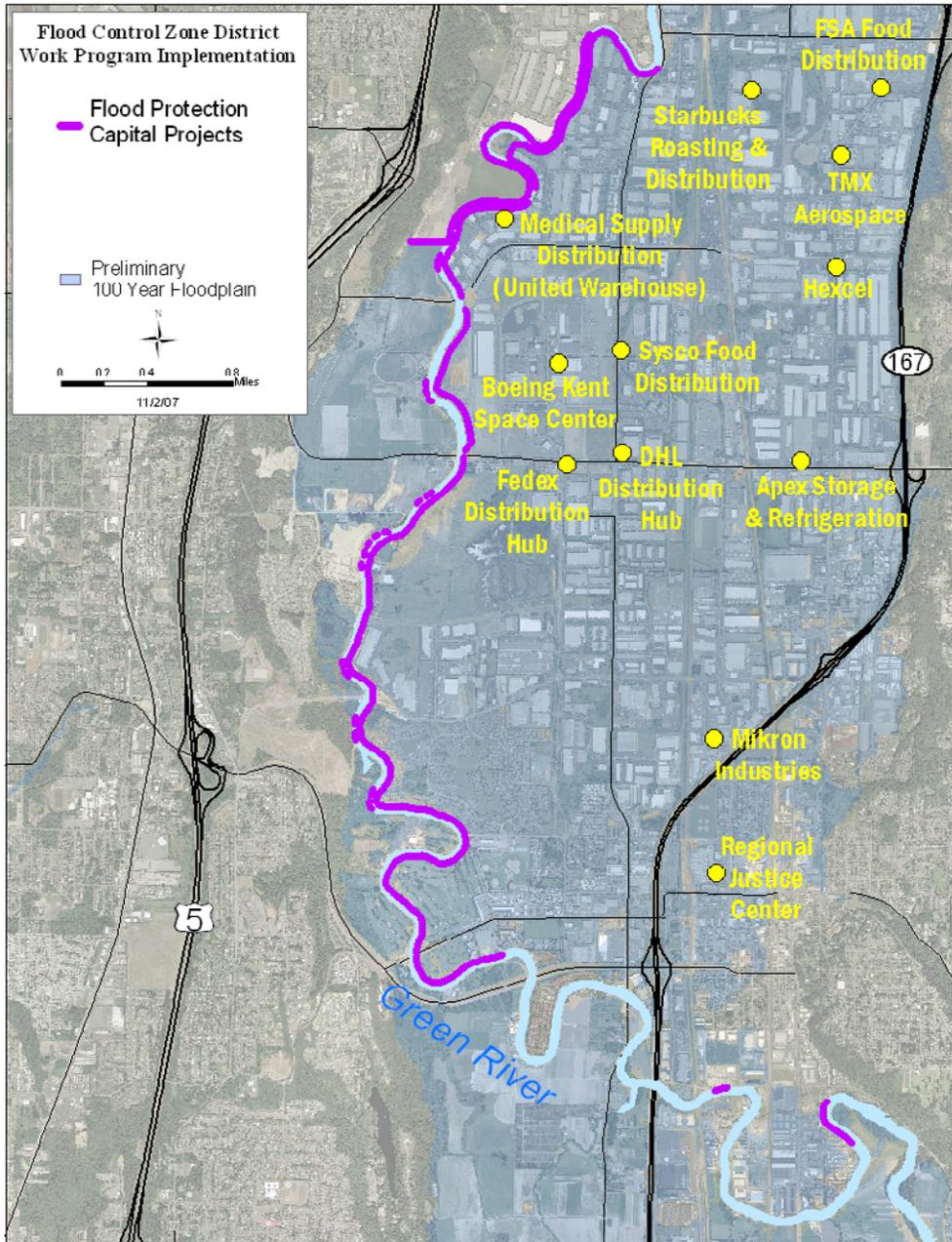
Green River Flooding Briefing

Presenters: Pam Bissonnette, Assistant County Executive
Carolyn Duncan, Communications Director
Mark Wesolowski, PSE Emergency Planning Manager



King County





Howard Hanson Dam protects the region's manufacturing and distribution centers and public facilities in the lower Green River floodplain and residential areas in the middle Green River floodplain



Green River →

**Landslide
Debris**

**Drainage
Tunnel**

**Small Depression
Location**

Spillway

Right Abutment

Embankment

**Big Depression
Location**

**Engineered
Filter Blanket**

**Flood Control
Tower**

**Eagle Gorge
Reservoir**

**Fish Passage
Facility Excavation**





Historic pool level of 1,189 feet on January 8, 2009



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When water levels dropped, depressions were found in the abutment



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Expected Consequences

- Howard Hanson Dam will not protect the valley as it has since 1962

Dam Christened; Shackles Raging Green River
BY JAY SCHILLE

The Howard Hanson Dam, a craggy-faced giant with a concrete spillway and new master of the turbulent and rapacious waters of the Green River, was christened yesterday to the cheers of 4,000 spectators.

The \$40.5-million flood control project at Eagle Gorge, 35 miles southeast of Seattle, has already proved itself by preventing three floods in the region since the beginning of the year.

It's estimated that the dam will save approximately \$1.9 million a year in eliminating flood damage, enhancing vast farm land and fostering industrial expansion.

DEDICATION ceremonies, on which the sun smiled in scattered bursts, featured an address by Washington Sen. Warren G. Magnuson. He said the dam "is going to mean a great deal for the economy of this valley."

He predicted that, through increased fishery resources, pollution control and flood prevention, the project would rapidly promote economic development in the area.

Other dignitaries present at the dedication were Lt. Gen. Walter K. Wilson Jr., Chief of Engineers of the Army, Col. Ernest L. Perry, district engineer in charge of the project, and Bert Cole, Commissioner of Public Lands of the State of Washington.

THE ALMOST annual floods in the Green River area prompted civic groups of Kent, Auburn, Renton, Seattle, Tacoma and Edmonds to unite in promoting the construction of the dam. Construction began in 1958 under the joint efforts of the Henry J. Kaiser Company and Raymond International. It was completed on March 31, 1962.

Since the dam is in Tacoma's Green River Watershed, it has been a restricted area since 1913. The dedication ceremonies were the first opportunity for the public to view the project.

Howard A. Hanson, for whom the dam was named, was chairman of a rivers and harbors subcommittee of the U.S. House of Representatives in the late 1930s. He was active in promoting public service activities in the area, and holding an executive position in the late 1940s.

A line of bus-trucks, serving as a makeshift parade float, stretched north across the dam for the ceremony for King County from 12 1/2 miles of Northern Pacific tracks.

TO CONSTRUCT the dam, the top of the dam for the ceremony for King County from 12 1/2 miles of Northern Pacific tracks.

County Requests Tukwila's Help On Flood Control

Tukwila has been requested to participate financially in the Green River Valley's flood control project.

A progress report on flood control measures and proposals to handling the Green River Valley's drainage problems was presented by Bruce Forbes of the King County Engineer's office at the city's council meeting Monday night.

Forbes stated that all the valley cities would be expected to participate financially on a token basis to qualify for Army Engineering Corps funds to further study the drainage problem.

The matter was referred to the council's flood control committee for recommendation and report before the city's next official meeting on February 4.

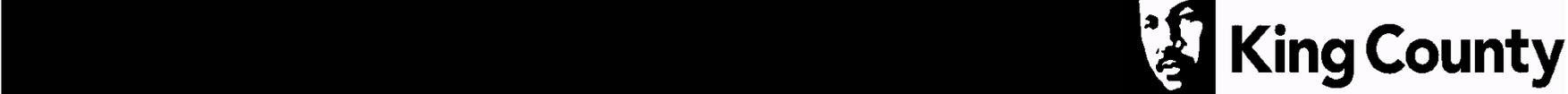
Mayor John W. Strander said funds would have to be allocated for the 1964 budget if approved by the council.

\$326,000 Is Spent On River

Flood control projects on the Green River begun and finished in 1962 required more than \$326,000, according to Walter E. Winters, county engineer and head of county flood-control work.

Winters said almost 11 1/2 miles of channel clearing was completed on the river and riprap for bank protection totaled 31,082 lineal feet (2.6 miles). Channel straightening work was done on 1,250 feet of the river.

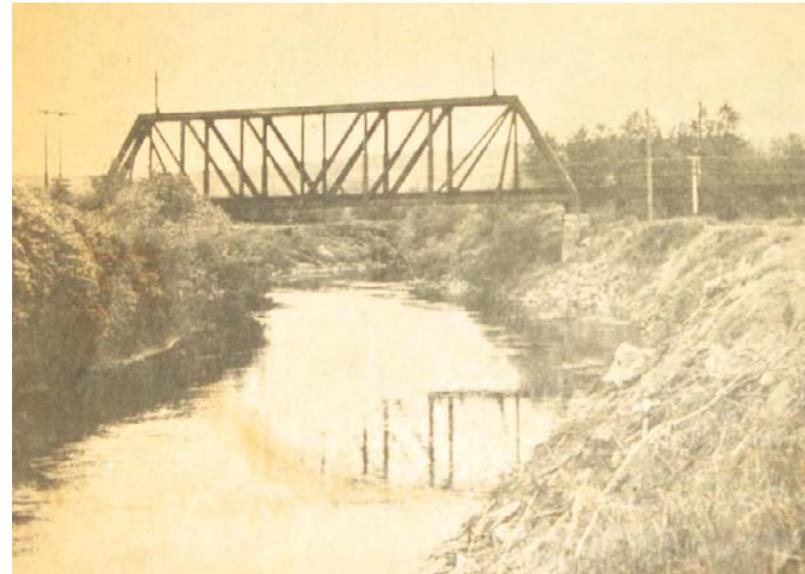
The engineer said the 1962 projects brought to a total of \$492,593 the amount spent on the Green River from the county bond.



Expected Consequences



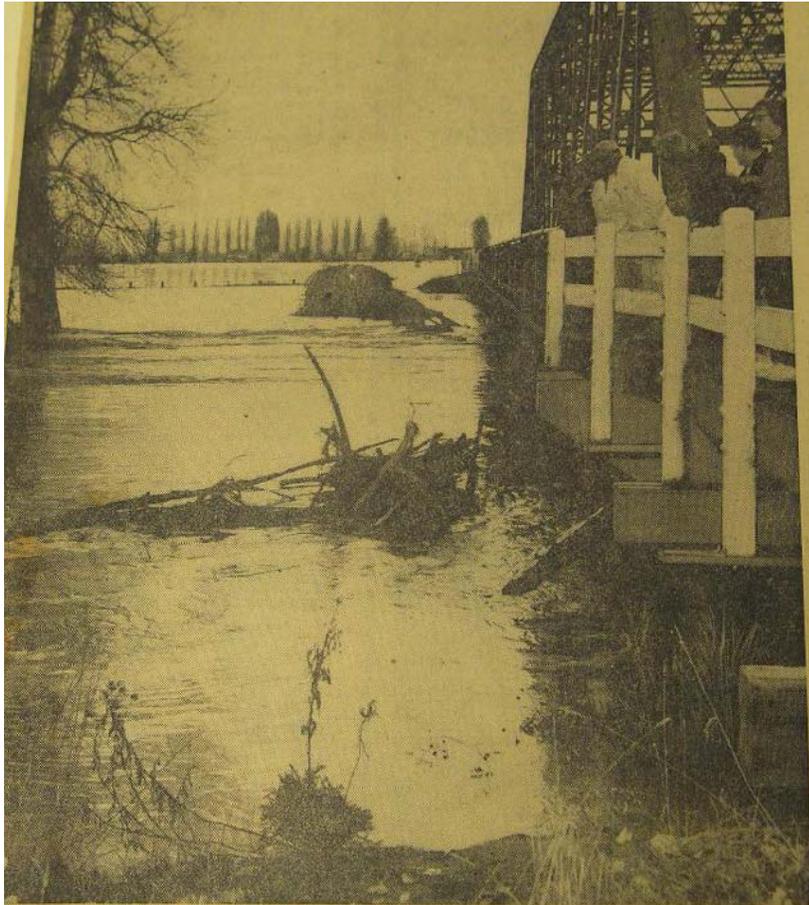
- Levee system downstream not designed for expected flows from Howard Hanson Dam



- Levees old and in need of repair; only two years of downstream levee repair projects constructed to date since Flood Control District establishment in 2007



Expected Consequences



Will Bridge Hold? Spectators Wonder

GROUP OF ANXIOUS RESIDENTS of the Kent
y peers down into swirling water beneath this
as raging river attempts to pull the span down.
s begins to collect against the base of the bridge,

adding to the already tremendous force of the swirling
river current. Note pile of logs and other material collect-
ing near center of bridge. This picture was taken on East
Valley Highway south of Kent.

—(Post-Intelligencer Photo by Harvey Davis.)

- Permanent Howard Hanson Dam repair projected not for 3-5 years according to USACE Expected result: wide spread flooding of Green River Valley for 3-5 years, from 1 to over 10 feet in depth
- Wide spread flooding expected to result in Valley power outages (electricity & gas), sewer system surcharges, water supply interruptions, potential interruptions of communications, major closures of transportation corridors (e.g., Hwy 167, parts of I-5)
- PSE commentary



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Expected Consequences



- Flooding due to weather
And
- 2/3s capacity of federal dam may be unusable
And
- Downstream levees not designed for resulting flows



Expected Consequences



- Unique situation where problem with a federal dam is pushed downstream to become a local and regional problem

Tukwila Manufacturing and Industrial Center, 2006



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King County Response to Howard Hanson Dam Operational Changes

- Collaborating with the Corps of Engineers to prepare dam operation and inundation scenarios
- Determining flood fight strategies with levees and within river
- Performing evaluation of levee conditions and overtopping locations
- Working with the Corps of Engineers to complete critical levee repairs
- Working with cities of Auburn, Kent, Tukwila and Renton on coordinated planning and communications



Critical Levee Repairs



Build on Completed Work

- 600 Feet – Briscoe #4 in 2007
- 9,300 linear feet at 6 sites in 2008

Implement 2009 Construction

- 2,200 linear feet at Horseshoe Bend, Kent
- Critical repairs at 3 other sites to protect critical public infrastructure and commercial and industrial land uses
- Pursuing Corps partnerships to address the low spots near Auburn

Preparing for 2010 Levee Setbacks

- Acquire sufficient right of way to set back the levee during 2010
- 18,000 linear feet of construction at 14 sites
- Corps ERP partnership – Upper Russell

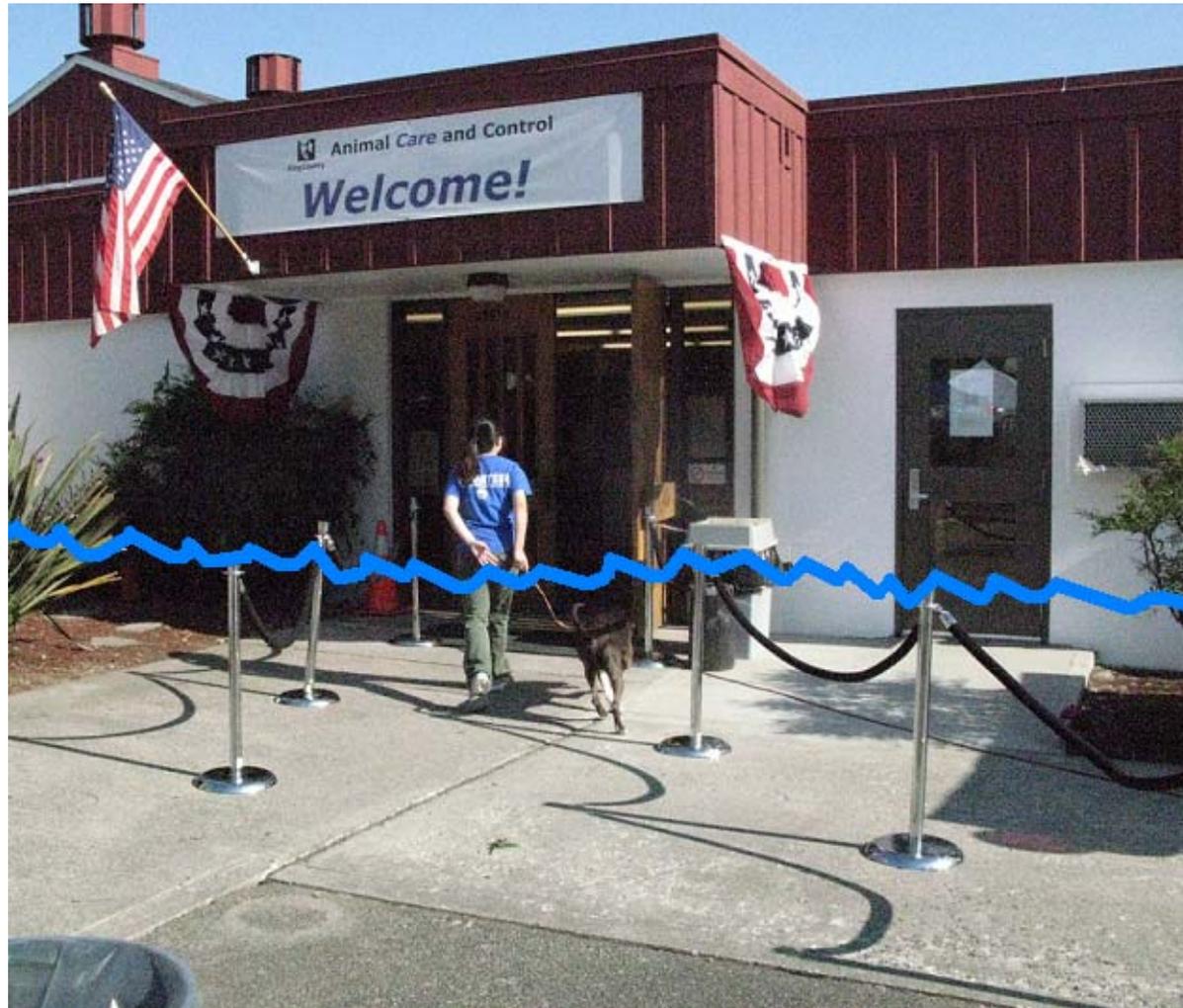


Owned General Government Buildings in Flood Area

- **Maleng Regional Justice Center**
 - Flood levels will range from 0' to 4' (Pmx Planning)
- **Aukeen Court**
 - Flood levels will range from 0' to 1' (Pmx Planning)
- **Animal Shelter**
 - Flood levels will range from 0' to 3' (USACE Flood Map)
- **Black River Building**
 - Flood levels will range from 0' to 7' (Pmx Planning)
- **Earlington Building**
 - Flood levels will range from 0' to 10' (Pmx Planning)



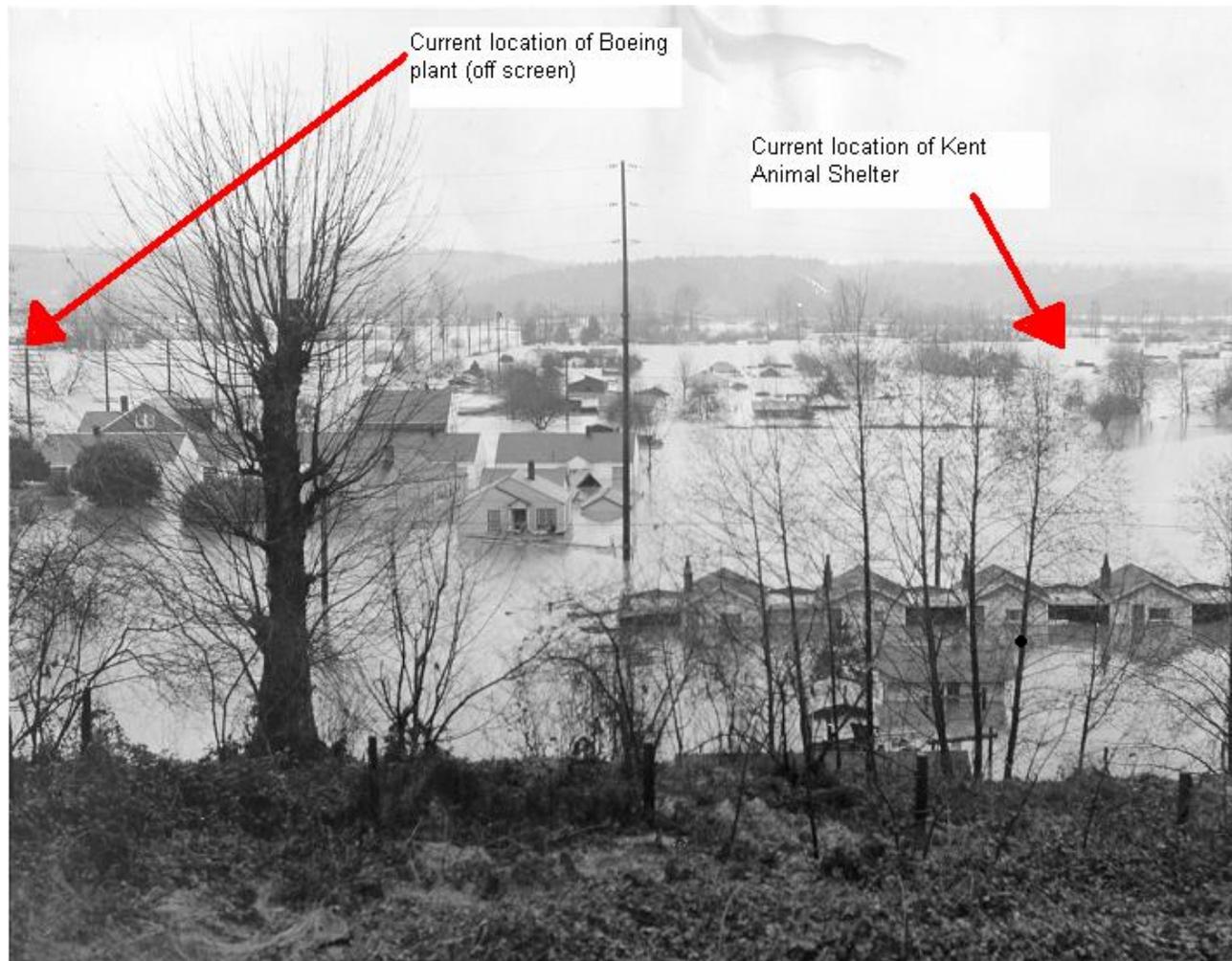
Kent Animal Shelter, projected flood levels, 2-3 feet



Elections (Earlington Building) Projected Flood Levels

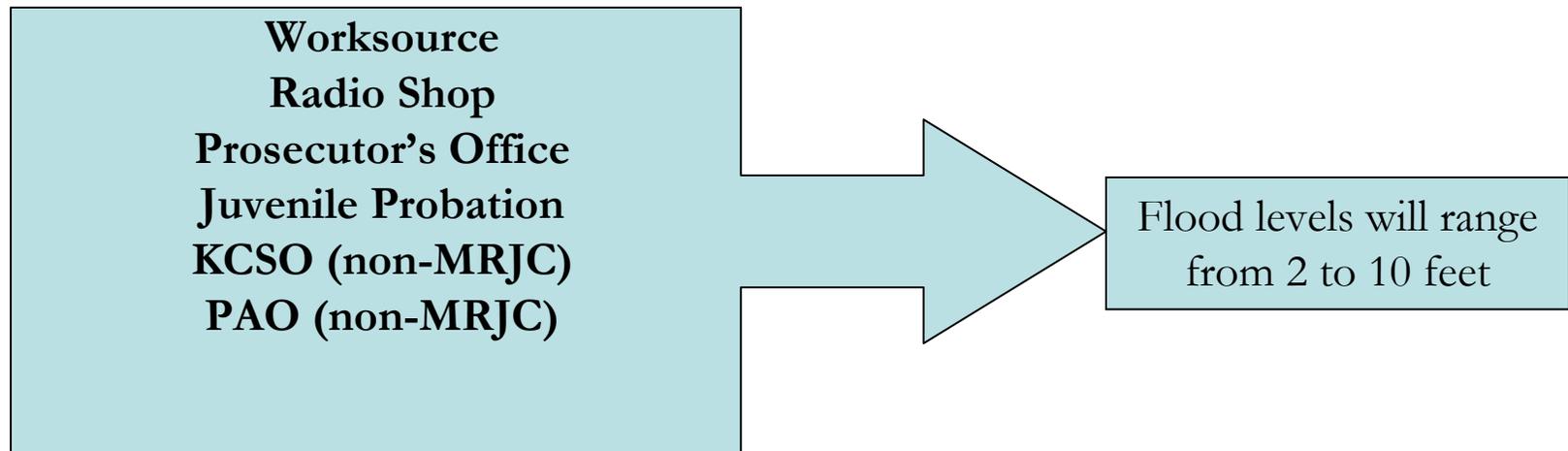


Kent/Renton Valley Flood, December 1946



Leased General Government Buildings in Flood Area

- **Multiple Public Health Clinics**
 - Flood levels will range from 0' to 4'
 - Relocation efforts underway



King County Response to Howard Hanson Dam Operation Changes

- Determination of needed resources:
 - Supplemental in preparation for King County
 - Supplemental request of the Flood Control District
 - Pre-request for state and federal resources now; advanced measures
 - Requesting state and federal commitment for reimbursement when flooding occurs
- King County early Emergency Proclamation: faster procurement; permitting
- Working with Valley cities, U.S. Army Corps of Engineers, FEMA, State Emergency Management, Mutual Aid Agreements, PSE, others
- Reviewed organization and decision-making

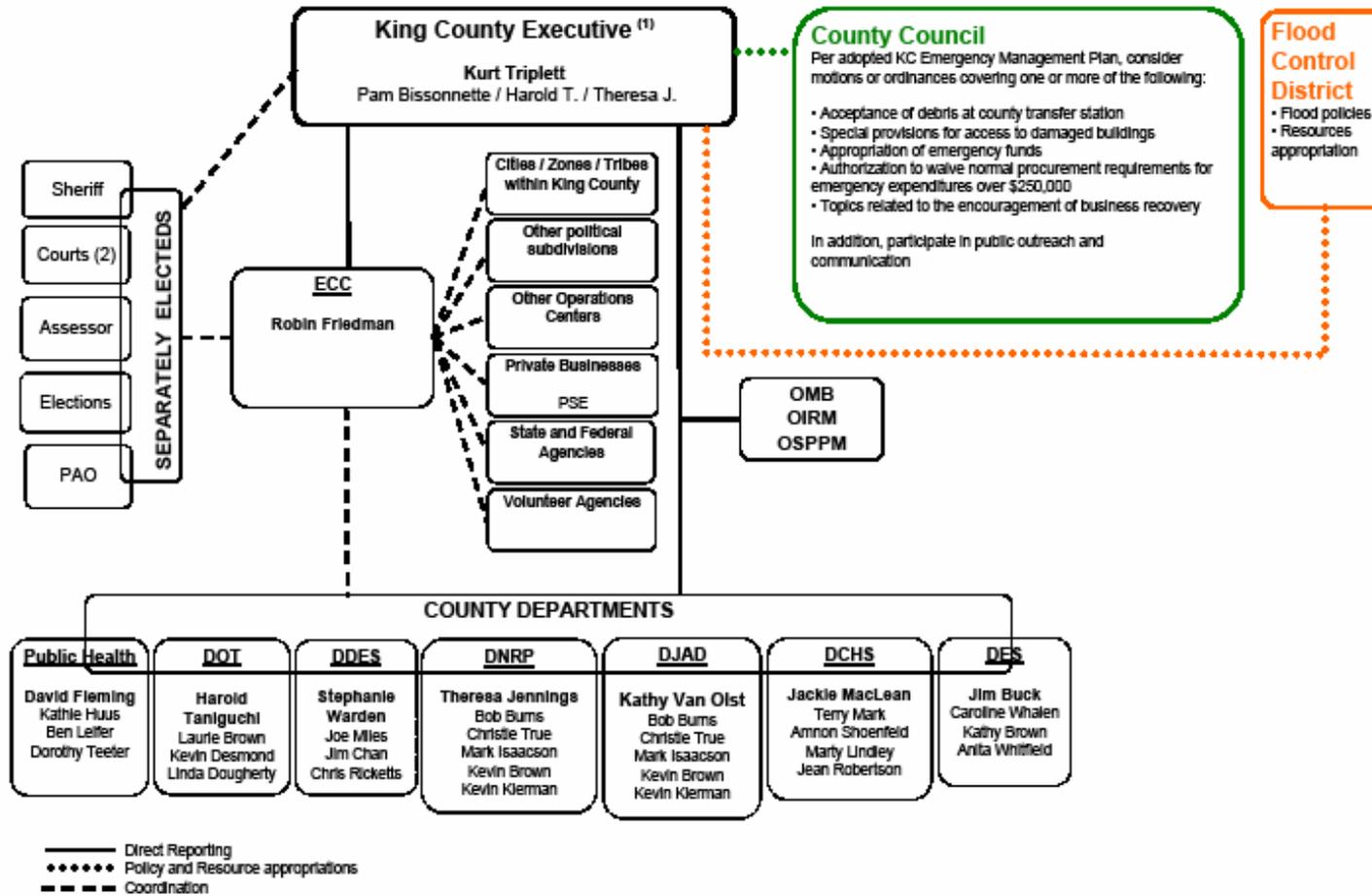


Potential Federal and State Reimbursements

- **FEMA Rules**
 - For costs after Presidential Emergency Declaration
 - Covers 75% of what is eligible
 - Examples of eligible costs include temporary evacuation, transport and sheltering; flood fighting costs
 - Examples of ineligible costs include permanent relocations, upgrades and equipment; public education and communications; training
- **Emergency Proclamations and Declarations**
 - Local & Regional: each jurisdiction does individually
 - State: may cover up to an additional 12.5% of reimbursement of eligible costs
 - Federal: usually only after emergency happens and after local and state emergency proclamations
- **Requesting Pre-Commitments for Reimbursement**
- **Current Estimates from \$10-\$35 million**



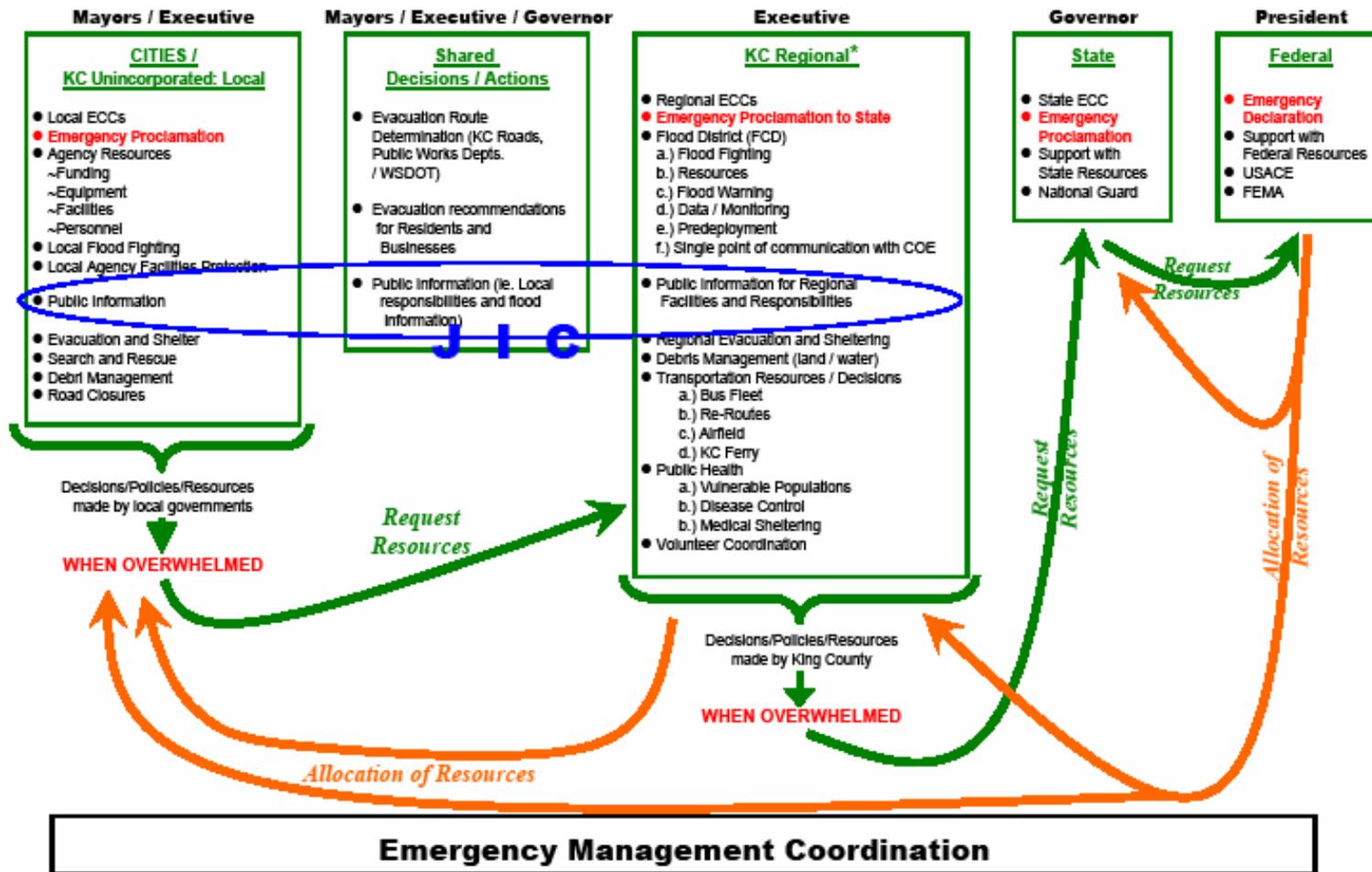
King County Government Emergency Management Linkage Chart



(1) See "Green River Flood Emergency Management Coordination Responsibilities and Decisions for Response" chart



Green River Flood Emergency Management Coordination Responsibilities and Decisions for Response



* PSE and SCL are regional providers for power

REVISED: 8/19/2009



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Public Outreach and Communications

Pre-flood Communication

Created external and internal communication plans

An aggressive goal for external

- Inform, educate and move residents to action
- Recommend a mix of earned (free) media and paid (advertising) media

Coordinating with local, state and federal communications leads

- Puget Sound Energy, Red Cross, others

Media relations

- General goal is a story per week
- Nine news releases produced equivalent to \$500,000 worth of coverage this year

Outreach

- Hosting regional Web site www.kingcounty.gov/floodplan
- Bilingual brochure and Web pages
- Letter and brochure mailed to 165,000 addresses
- Generating response—residents and businesses: am I in inundation area

Survey will help refine messages and define best mediums



King County

Outreach and Communications Plan

Summer/Fall 2009

Pump up the volume-post Labor Day

- More news stories—survey results, immigrant outreach, events
- KCTV producing programming
- Events—town hall, workshops, joint chamber meeting
- Sept. 14 kick off with state and federal electeds
- Another mailing
- Mid-Oct launch of annual Take Winter by Storm

Challenge: Time and money

- A lot of existing materials on general hazards
- Extraordinary situation, multi-year risk—Green River specific needed
- Partner contributions likely—PSE, corporations, FEMA
- Much of the paid media we buy will see 100% match

Internal Communication

- Speakers Bureau, Brown Bag presentations
- PowerPoint and video
- Employee Web site launched Sept. 1—accessible from home
- Working with Human Relations—policies



King County Activities Underway from Now Until Flood Season

- Complete plans for sheltering, evacuation, transport and flood fighting
- Fully assess emergency operations of critical facilities
- Test readiness through table-top and training exercises
- Request pre-declaration of emergency
- Extensive public information & outreach
- Continue monitoring Howard Hansen status with the Corps of Engineers
- Flood Warning Center on alert



Response During Flood Emergency



- Activation of King County Emergency Response Plan
- Activation of Joint Information Center
- Activation of Regional Emergency Response Plan



King County Response During Flood Emergency



- Open Flood Warning Center earlier in response to major storm forecasts and issue flood warning notifications sooner
- Increased Flood Patrols by King County, Corps of Engineers and City staff
- Automated callouts through MyStateUSA



Preparedness – Elected Officials

- Action on emergency ordinance
- Expeditious consideration and action on Green River flooding supplemental
- Review council roles outlined in King County Emergency Management Plan and Flood Control District Agreement
- Provide consistent messages to the public, working with the regional Joint Information System and Center, to result in public preparation now, and reasoned and calm responses during a flood emergency
- Schedule additional briefings for specific significant flood responses, e.g. protection of county facilities in the Green River Valley, continuity of government operations, recovery



Preparedness – What Can Citizens Do?

- Sign up for automated flood notifications through MyStateUSA
- Buy a Weather Radio; battery powered AM Radio
- Purchase flood insurance (30 day wait period)
- Check sewer back-up insurance
- Determine evacuation route
- Create a disaster plan for you and your family

